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A COST ANALYSIS
OF RECAPTURING SELECTED CHAMPUS WORKLOAD
AT FITZSIMONS ARMY MEDICAL CENTER

A Graduate Research Project
Submitted to the Faculty of Baylor University
in Partial Fulfillment of the
Requirements for the Degree of Master of
Health Care Administration

by

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<p>This study examined the inpatient cost difference per bed day between Fitzsimons Medical Center and CHAMPUS in DOD Region III to determine the most available and financially attractive services to which additional resources should be given in order to save the most money. The author identified several services within the hospital that could provide increased services at a significant overall savings to the government. The services would require an increase in staffing to effect the increased ability, but still at a significant savings.</p>					
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I. INTRODUCTION

A. A HISTORICAL PERSPECTIVE

Medical services under the auspices of the federal government came into existence at different periods in the history of this country. As might be expected in any developing nation, none of these services were part of an integrated planned program but rather, evolved as a reaction to a perceived need. The only relevant issues were underlying ones, such as national defense or sustainment of commerce.

Generally, the first Federal provision for direct medical care is considered to be the act passed by Congress on July 18, 1798. The legislation, entitled "Act for the Relief of Sick and Disabled Seamen," provided care for merchant seamen in special marine hospitals.¹ The organization created by the Act is considered to be the origin of the Public Health Service which now provides direct medical services through hospitals, out-patient clinics and contract health care providers. In 1799, the Act was expanded to include governmental naval service, with members of the U.S. Navy accorded the same benefits as were the crews of merchant vessels.²

Although physicians and surgeons had served with the Revolutionary Army, a formal system had not evolved within the military for medical care until

1818. At that time, the Army Medical Department was founded.³ Since then, both fixed and field hospitals, in conjunction with a system of dispensaries (health clinics in more modern terminology), have served U.S. troops around the world. In 1884, the system was expanded such that military dependents were now authorized free care in these facilities.⁴ In retrospect, the "Act for the Relief of Sick and Disabled Seamen" was authorized to improve a serviceman's inadequate pay by providing free medical care that was unavailable at many remote military posts. The language of this act was quite vague and came to be considered as authorization for care of both dependents and retirees on a space available basis.

Another group that was designated as beneficiaries of free government-sponsored health care were the American Indians. This responsibility was originally given to the U.S. Army program. It was later transferred from the U.S. Army Medical Department to the Bureau of Indian Affairs, and then to the Public Health Service under the Department of Health and Human Services.⁵ Once again, there was no formally organized plan to provide health care, just a general mandate stating that the American Indian was a "ward of the state," and entitled to health care from available governmental sources as a humanitarian service.

A little known, but active, federal health care system was developed in 1865 when Congress created the Freedman's Bureau for the relief of unemployed.

ill, and infirm blacks. Although no specific provisions were made for direct health care in the Bureau's charter, by 1867 it was operating 46 hospitals with 5,292 beds. Due to a lack of political support, the bureau and its medical systems gradually ceased to exist. All that has remained today is the Freedman Hospital in Washington, D.C.⁶

The U.S. Government gradually assumed responsibility for providing health care to war veterans. Originally the care was of a domiciliary type and was provided in soldiers' and sailors' homes under the auspices of the War Department. After World War I, a number of legislative acts by Congress gradually increased medical benefits. In 1921, several fragmented programs were consolidated under the auspices of the newly formed Veterans Bureau. As veterans' programs grew, by 1939, the Veterans Bureau evolved into what is now known as the Veterans Administration.⁷ The growth of medical care for the veteran has been incremental. Expansion of services to the veteran usually occurred near the end or immediately after a war when favorable public sentiment for veterans was high.

In addition, the U.S. Government has provided direct medical care to other smaller population groups. Among these were leprosariums for the treatment of lepers, hospitals and dispensaries for federal prisoners. facilities for the treatment of drug addicts, and mental hospitals such as St. Elizabeth's in Washington, D.C. The majority of these, which were started as

a specific reaction for a specific need, are run by the Public Health Service of the Department of Health and Human Services.

By 1949 the federal government was providing direct health care services for an estimated 30 million Americans. The first Hoover Commission of 1949 was created to study and investigate the organization and methods of operation of all elements of the Executive Branch of Government. The first commission concentrated on efforts to promote greater efficiency and to effect greater economy. The second Hoover Commission was charged by Congress "to promote economy, efficiency, and improved service in the transaction of public business" in all executive agencies. In studying the federal health care system at that time, commission investigators found that of the \$4 million spent on direct health care, 66 percent went to the Veterans Administration and 25 percent went to the Department of Defense. In 1949, their conclusion was:

"The enormous and expanding federal medical activities are devoid of any central plan. Four large, and many smaller, government agencies obtain funds and build hospitals with little knowledge of, and no regard for, the needs of others. They compete with each other for scarce personnel. No one has responsibility for an overall plan. There is not even a clear definition of the classes of beneficiaries for whom care is to be planned. The government is moving into uncalculated obligations without an understanding of their ultimate costs, of the lack of professional manpower available to discharge them, or of the adverse effect on the hospital system of the country."⁸

The Hoover Commission of 1955 basically echoed the same thoughts. As a result of these findings the commission recommended the establishment of a cabinet level United Medical Administration to combine all health care functions being administered by the government. It was now recognized that the U.S. Government was opening an extremely large direct health care system without a congruent plan. Unfortunately, few of the Hoover Commission recommendations were implemented and, for better or for worse, it had little effect on the federal health care system. However, since it is still quoted, it provides a structure to study the role of the federal government in providing direct medical services.

The Grace Commission

The PPSSCC, which stands for the President's Private Sector Survey on Cost Control, commonly known as the Grace Commission, was a follow-up to the Hoover Commissions of three decades earlier. One of the Grace Commission's contentions was that the government was currently spending billions on functions and services that could better be handled in the private sector at less cost. Some of the recommendations affecting the federal delivery of health care were:

- (1) Veterans Administration hospitals should be constructed and managed by private firms.
- (2) The Veterans Administration should convert its excess

hospital capacity to long-term care facilities, substitute less costly out-patient care where appropriate and transfer to nursing homes those patients who no longer needed acute care.

- (3) The Veterans Administration and Indian Health Services should use fiscal intermediaries to process insurance claims to cut the cost of processing, uncover duplication and coordinate benefits.
- (4) The Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) should find out if patients have private health insurance coverage and collect from those third party payers when there is duplicate coverage.
- (5) A defense health agency should be created to coordinate management of direct health care and the CHAMPUS program.⁹

The final report of the Grace Commission did not arrive at the White House in time for the 2,478 recommendations to be incorporated into the fiscal 1985 budget request. Current Budget requests from the President have incorporated a few of these recommendations. For example, military hospitals are now collecting from private health insurers when there is duplicate coverage.

The Public Health Service

From 1912 to 1982 the Public Health Service was a growing organization. It gathered under its auspices the National Office of Vital Statistics, the Communicable Disease Center, the National Institute of Mental Health, the Indian Health Services, and various other programs of the Health Services

Corps, to include drug abuse and comprehensive health planning programs. In 1968 the Public Health Service was placed under the control of the Assistant Secretary of Health and Scientific Affairs of the Department of Health, Education and Welfare (now the Department of Health and Human Services).¹⁰ One of the recommendations of the Hoover Commission of 1955 was that the Public Health Service hospitals be closed. The Office of Management and Budget strongly supported this recommendation and led a crusade over two decades to obtain their demise. In 1982 the funding of eight hospitals and eight clinics was deleted for the following year. The Uniformed Public Health Corps was earmarked for reductions in force or for conversion to civil service status.¹¹ The reduction in Public Health Service hospitals, however, had an unexpected side effect. Many active duty service members, dependents and retirees had been receiving treatment from Public Health Service hospitals and clinics. When these services were reduced, those beneficiaries turned to CHAMPUS to pay for their care. The cost to the Army for fiscal year 1985 for such treatment was over \$5 million.¹²

Department of Defense

The Department of Defense (DoD) provides medical care to its active duty personnel, retired personnel and their dependents. This is done through a system of over 150 hospitals operating with an interlinked support system of smaller health and troop clinics. The cost of operating this systems exceeds

\$4 billion. ¹³ The DoD continues to operate on a tri-service basis with slightly more cooperation among the three services now than at the time of the Hoover Commission. However, the DoD continues to foster three separate medical systems with different methodologies and regulations, and with consequent overlapping of services and keen competition for medical and financial resources despite criticism from Congress and the Office of Management and Budget.

Actual and perceived parochial overlapping led the Senate Armed Services Committee to initiate a study to consider creation of a "Defense Health Agency" in 1982. This study, concluded on April 22, 1982, recommended that a Defense Health Agency, similar in structure and function to the Defense Logistics Agency and the Defense Intelligence Agency be established. The study recommended combining regional efforts in the United States and full cooperative sharing of services between the Army, Air Force, and Navy.¹⁴ The Navy and Air Force Surgeons General opposed this action while the Army Surgeon General remained neutral.¹⁵ Since that time, the Assistant Secretary of Defense for Health Affairs has undertaken to consolidate functions of the individual service's Medical Departments. One of the biggest problems facing the Assistant Secretary of Defense for Health Affairs is increasing medical costs. Of special interest to the DoD is the CHAMPUS costs. When a line in the federal budget exceeds one billion dollars it draws attention. Since CHAMPUS is "beans and not bullets" it is a particularly noticed area.

B. THE HISTORY OF CHAMPUS

In 1884, the Congress of the United States directed that, "the medical officers of the Army and contract surgeons shall, whenever practical, attend the families of the officers and soldiers free of charge." Through the years medical care to dependents had increased. By the end of World War II, medical care for all of these categories had become institutionalized and was considered an "accepted benefit" for recruiting purposes.

In 1955, the second Hoover Commission was created to study the Federal Government organization which included the military health care system. Among its recommendations were (1) the need to better coordinate its programs, including the placement of executive agents in the regions; (2) specialized facilities, including a Medical Center for each Military Department needed to be created; and (3) management authority was vested in the Secretary of Defense. It also recommended a civilian health insurance plan for military families. The latter came into being as the Dependents Medical Care Act of June 7, 1956 (Public Law 84-569), the precursor of CHAMPUS.

The next step in the evolution of CHAMPUS is best described by Vernon McKenzie, Principal Deputy Assistant Secretary of Defense for Health and Environment, Department of Defense, in testimony before the House of

Representatives Committee on Armed Services hearings held in the fall of 1974:

"Beginning in 1961, large numbers of military personnel who began their military careers during World War II became eligible for retirement by virtue of completing 20 years of active duty military service. In 1962, the impact of the retirement problem on the military health care system became a matter of concern within the Department of Defense. Early in 1963, the Secretary of Defense established a study group to look into the health care aspects of the retired population.

Early in 1964 concern on the part of the House Armed Services Committee about this problem led the chairman to appoint a special sub-committee chaired by the late L. Mendel Rivers to review the matter. The Rivers' subcommittee considered the report made to the Secretary of Defense by the Department of Defense study group in making its own recommendations. Both groups advocated the establishment of a civilian health care program for retired members and their dependents since it was clear that in a matter of a few years the health care needs of the retired military population could no longer be met entirely by military medical facilities. In 1965, the Department of Defense forwarded proposed legislation to the congress recommending, in effect, that retired members and their dependents be added to the CHAMPUS program. Our proposal, with some modifications, was enacted in 1966."¹⁶

The Military Medical Benefit Amendments of September 30, 1966 (Public Law Number 89-614) liberalized the ten year old program in two ways. First, it included all members or former members of the uniformed services who were "entitled to retired or retainer pay," and their dependents, and all dependents of deceased personnel in the program. Second, it expanded the range of benefits available under the program, especially in the areas of ambulatory care and drugs. The expanded ambulatory care benefits were introduced for dependents of active duty members on October 1, 1966. During committee hearings and passage of the bill it was commonly called "the

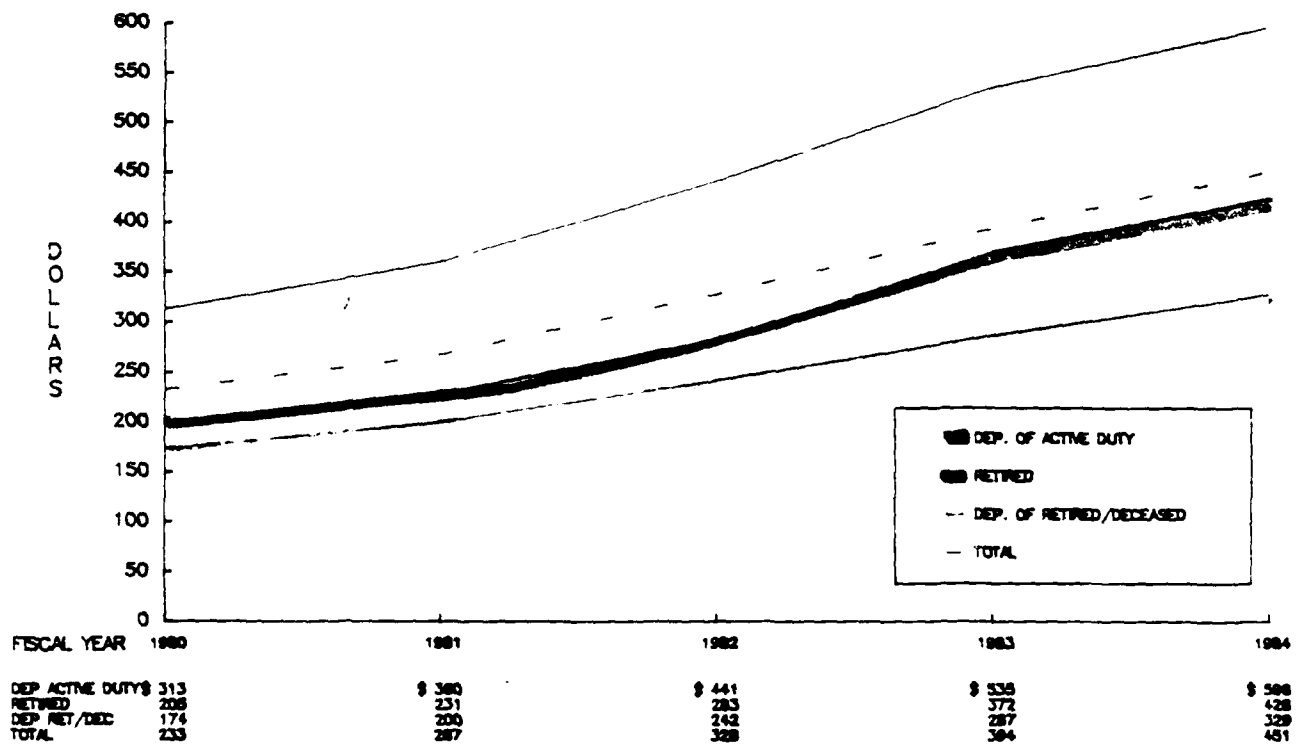
Military Medicare bill. Expanded inpatient benefits, and the inclusion under the program of retirees and their dependents and the dependents of deceased personnel, were effective on January 1, 1967.¹⁷

C. CURRENT EFFECTS AND COSTS

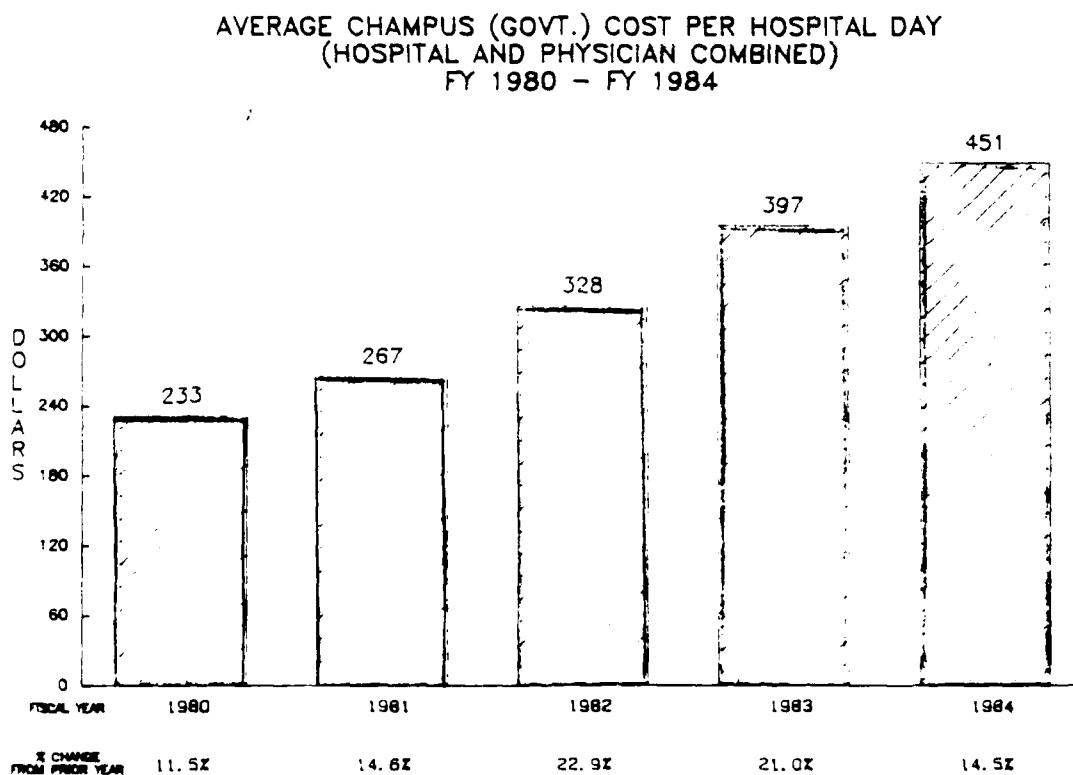
CHAMPUS became, in effect, an "automatic entitlement Program" similar to the Medicare program which is administered by the Department of Health, and Human Services. It was automatic in the fact that those funding and administering the program had no control over who entered the program. To make things more difficult, CHAMPUS paid customary or prevailing fees to health care providers to remain competitive with Medicare and other third party insurance payers. The cumulative impact of these factors was to increase the volume of business under the CHAMPUS program from 650,000 claims and 70 million dollars in expenditures in fiscal year 1966 to more than 1.5 million claims and 160 million dollars of expenditures two years later.¹⁸ Since then the costs of CHAMPUS have continued to escalate. The graph in Figure 1 on the following page indicates the increasing cost per bed day for dependents of active duty, retired military personnel and dependents of retired or deceased personnel. It is generally believed that the increase in costs of retired personnel is reflective of both the numbers and increasing age of retired persons.¹⁹

Figure 1

AVERAGE CHAMPUS (GOVT.) COST PER INPATIENT DAY
(HOSPITAL & PHYSICIAN) BY BENEFICIARY CATEGORY
FOR CARE RECEIVED DURING FY 1980 - FY 1984



The graph in Figure 2 graphically illustrates the rising costs per bed day for all categories of beneficiaries. Particular note should be made that this is after the patient has paid his deductible portion that CHAMPUS does not pay. In addition some diagnostic procedures are not covered under CHAMPUS, the patient carries the full brunt of these charges. Thus the cost listed in Figure 2 and the rest of this study are not true costs but only the portion that the Government has to pay. All CHAMPUS costs addressed in this study will combine hospital and physician costs since the Uniform Chart of Accounts addresses hospital care costs.



The graph in Figure 3 illustrates both the increasing CHAMPUS population and per capita costs. This is a numerical recap of the total information displayed in Table 1. Numerical consideration of the information starkly brings out the fact that we are dealing with increases of hundreds of thousands of patients throughout the whole CHAMPUS system. This coupled with the increased per capita costs makes the increases in costs more focused.

TOTAL AND PER CAPITA HEALTH CARE COST TO CHAMPUS FOR ALL ELIGIBLE BENEFICIARIES

	NUMBER OF CHAMPUS ELIGIBLES (IN THOUSANDS)	CHAMPUS HEALTH CARE BUDGET (\$ IN THOUSANDS)	PER CAPITA COST
FY 1981	6,324	\$ 804,251	\$ 127
FY 1982	6,520	\$ 1,035,500	\$ 159
FY 1983 *	6,827	\$ 1,115,372	\$ 163
FY 1984 *	6,924	\$ 1,184,113	\$ 171

* THE ESTIMATED NUMBER OF CHAMPUS ELIGIBLES MAY BE SUBJECT TO CHANGE DUE TO REVISIONS IN THE ESTIMATED NUMBER OF RETIREES AND THEIR DEPENDENTS.

FIGURE 3

The graph in Figure 4 illustrates the only bright spot on the CHAMPUS horizon, that of declining length of patient stay. This is due to two factors: better utilization review by CHAMPUS agencies and wider recognition of utilization review programs in the private sector. Length of patient stay also decreased nationally during this period.

**AVERAGE LENGTH OF STAY (DAYS)
BY CATEGORY OF BENEFICIARY
FOR FY 1980 - FY 1984
(EXCLUDING PSYCHIATRIC)**

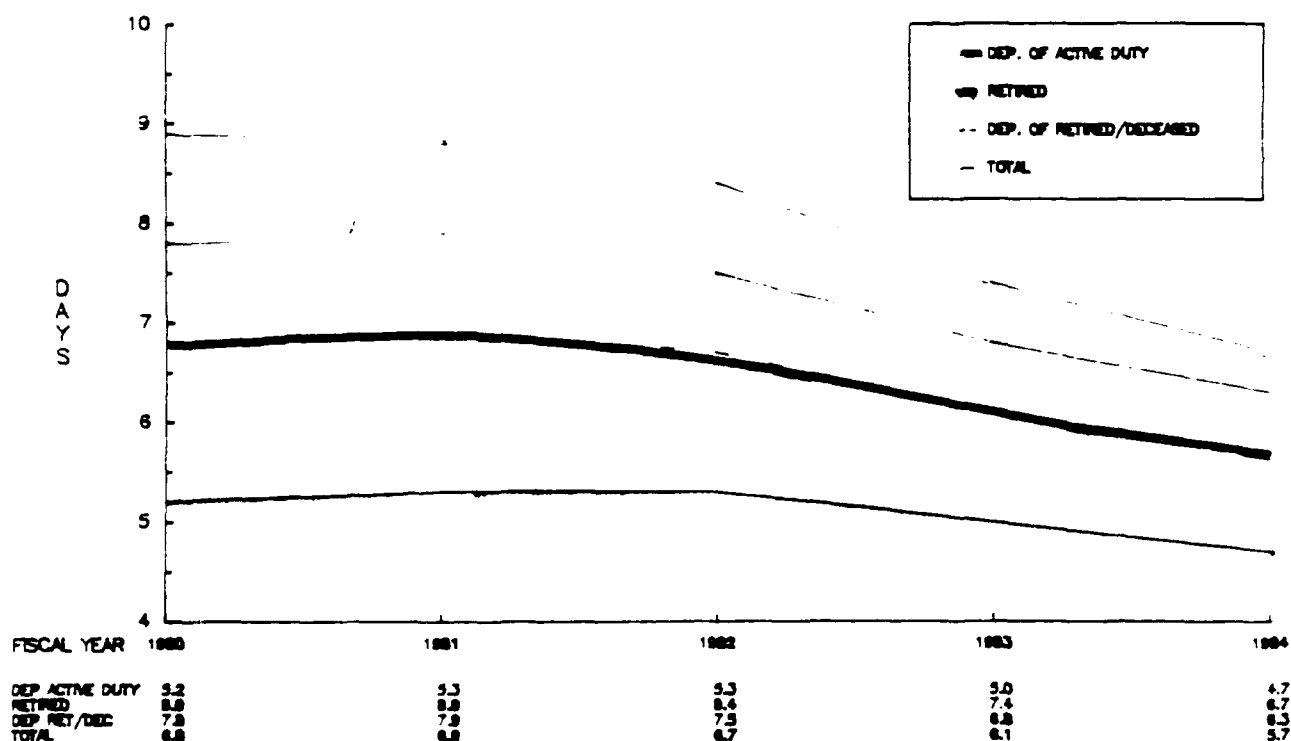


FIGURE 4

In Fiscal Year 1983 the Surgeons General began a concerted effort to assist in containing CHAMPUS costs by recapturing workload in fixed military medical facilities where staffing allowed. This has been somewhat successful in slowing the rate of increase in CHAMPUS costs in that fewer statements of non-availability were given out in the military medical facilities catchment areas.²⁰ However, these statements of non-availability only applied to the 40 mile geographical catchment area surrounding military medical care facilities. Outside of these catchment areas, CHAMPUS costs continue to grow because of the increasing number of retired military personnel under 65. At age 65 retired military personnel and their dependents have to use MEDICARE or use a military medical facility. The bulk of the retired population under 65 is also aging which generally indicates a greater number of medical problems per individual thus, a greater cost to the CHAMPUS program.²¹

This study will explore another option which can reduce costs, i.e., by shifting inpatient care delivered by the private sector and paid for by the CHAMPUS program to inpatient care delivered at military medical facilities. The primary intent of this study is to determine (and demonstrate) if the transfer of such services will result in direct cost savings to the Department of Defense.

CURRENT CHANGES AND PROPOSED PROGRAMS

After several years of staying within projected budgets CHAMPUS has suffered a sudden setback. As indicated in the July 1986 issue of *U.S. Medicine*:

"Massive cost overruns have hit CHAMPUS this year, leaving the Defense Department nearly half a billion dollars short of funds for the civilian health care program.

Claims received from CHAMPUS beneficiaries are up nearly 20 percent over the comparable period last year. John Dexter, deputy Assistant Secretary of Defense for Medical Resources Administration, told *U.S. Medicine*.

In mid-June officials in the DoD Health Affairs Office sent to Congress a request to reprogram \$260 million to cover the CHAMPUS deficit but realized almost immediately that even that amount would not be enough, Dexter said.

Consequently, late last month another reprogramming request was being prepared. Dexter estimated it would seek another \$200 to \$250 million, bringing the total amount needed to cover the CHAMPUS deficit to about \$500 million or \$.5 billion."²²

Reasons given for the over runs were (1) Gramm-Rudman cutbacks which amounted to a 5% cut in the healthcare budget; (2) increased concern for quality assurance which resulted in cutting back in the workload of an overworked staff; and (3) inflationary factors in healthcare.

One of the "fixes" implemented was Primary Care (PRIMUS) clinics ran by

civilian contractors. Initially these clinics were started in the Washington, D.C. area, now more are being planned in areas of high need. These primary care clinics increase patient satisfaction due to faster outpatient services, however they do not decrease costs in the area of inpatient services where the greatest of CHAMPUS' cost increases have been occurring. In fact, there is some indication that PRIMUS clinic costs have skyrocketed due to eligible persons now using the PRIMUS clinic services rather than civilian facilities paid for by private insurance.²³

Another of the solutions in the planning for CHAMPUS is the Improve Medical Programs and Readiness Immediately, Not Tomorrow (IMPRINT) Program.²⁴ Both the House and Senate Armed Forces Committees have voiced doubt over the IMPRINT program in terms of its ability to save money and provide satisfactory service to beneficiaries. The Senate Armed Services Committee wants to stipulate that any change in program will provide either the same care at less cost to the government or better care at no additional cost.²⁵

Now nearly a year behind schedule, the Department of Defense is asking for bids on a scaled-down version of IMPRINT. The plan which officials hoped to have in place nation wide this year is being tested in three pairs of states - Florida and Georgia, North and South Carolina, and California and Hawaii. Bids for this test are due by the end of May and the three contracts awarded in the fall of 1987 would take effect in the spring of 1988.

Contracts would run for one year but could be renewed for two more years at the government's option. Originally, the Department of Defense had intended to divide the country into thirds and ask for fixed price bids to cover the approximate \$1.8 billion in health care received by six million military dependents and retirees covered under CHAMPUS. Beneficiaries could have retained their current CHAMPUS coverage or signed up in a new CHAMPUS Prime program that offered free or low-cost primary care but required beneficiaries to use the contractors' network of preferred providers for much of their care.

Military hospitals would have continued to deliver much of the retirees' and dependents' care but the contractors were to develop a "gateway" to shunt more of the complex surgical cases into the military facility while sending more primary care to civilian physicians and hospitals. The contractor also was to supply civilian physicians, nurses, and other staff to military facilities in some cases. After concerns were raised by potential bidders and beneficiaries, Congress required a demonstration that was not to include more than a third of all CHAMPUS beneficiaries. The six states that are included in the demonstration do have about a third of all retirees and dependents. They also were selected because they have some of the most crowded military medical facilities in the country. One of the major complaints about the original CHAMPUS reform plan was the degree of risk required of the potential bidders. Defense officials now have made additional data on military facilities and CHAMPUS available to help bidders evaluate the risk. More

important, risk in the demonstration plan has been scaled back. This is in part because the contracts cover smaller areas and each are worth about \$200 million rather than the three \$600 million contracts originally envisioned. In addition, the risk provisions have been rewritten in the demonstration. Under the original plan, the government could have required contractors to continue in their contracts for three years, with price adjustments only if the contractor workload went up because military facilities treated fewer dependents and retirees than they now do. Many CHAMPUS eligibles now use other benefits or avoid care rather than incur the CHAMPUS co-payments, however, and contractors feared they could suffer severe three - year losses if these "ghosts" were lured back into CHAMPUS by the promise of free primary care benefits. Under the demonstration contractors still would have absorbed any losses suffered because of unanticipated utilization increases in the first year. But if the government exercised its option to continue the contract after that time, the price would be renegotiated to account for utilization increases.

The "gateway" requirements in the original plan also have been revised to give contractor more flexibility in setting up a system, and the concept has been renamed the "health care finder". The new bid request also makes clear that bidders will have "substantial latitude to propose delivery management techniques they believe will facilitate control of the financial underwriting risk" 23 25 26

As this recent literature review indicates, there is an increasing concern at all levels of government about the cost of providing health care under the current CHAMPUS program which was designed originally to pay for outpatient care and not inpatient care. The original IMPRINT proposals were strong in their intent to direct high cost inpatient care to military medical facilities. This would have directly in line with the intent of this paper. Under the new test programs in the three areas it will be a year before the impact of the new proposals can be evaluated.

Health care planners have found that they do not have control over their constituent populations or the cost of medical care charged to them. The subject of this paper addresses one factor that can be controlled. That is, the additional utilization of currently available inpatient treatment resources at one medical center in the DoD, i.e, Fitzsimons Army Medical Center. If certain intended provisions of the IMPRINT program come to fruition and the "health care finder" portion of the program actually directs patients to military medical facilities for certain inpatient care, money can be saved. This research will poignantly demonstrate the amount of money that could be saved by Fitzsimons Army Medical Center if such utilization were initiated.

II. DISCUSSION

A. STATEMENT OF RESEARCH QUESTION

The question which will be addressed is: what is the inpatient cost differentials per bed day between Fitzsimons Army Medical Center and the average of those paid by CHAMPUS in DoD Region III. As a corollary, what are the most available and financially attractive services to which additional resources should be given, in order to save the most money. This has not previously considered for inpatient care in a military medical facility.

B. OBJECTIVES, CRITERIA, ASSUMPTIONS, AND LIMITATIONS

OBJECTIVES

Objective One: Determine in which medical specialties Fitzsimons Army Medical Center (FAMC) can provide direct inpatient medical care at less cost than that provided by the civilian sector. This has not been done before because of (1) a lack of trust in the military Uniform Chart of Accounts (UCA) financial data and (2) attempts to determine equivalent medical specialties costs which correspond with the Uniform Chart of Accounts categories and CHAMPUS output had not previously been successful. This study has attempted to correlate the costs between these two organizations wherever possible.

Attempted Conversion Diagram

UCA Database		CHAMPUS Database	
ICDM - 9 + (CM)	+-	ICDA - 8	= Average
coding		coding	equivalency

CHAMPUS has already spent over \$750,000 trying to determine a direct conversion between the UCA and CHAMPUS data bases. This was unsuccessful due to differences in terminology that could not be transposed.²⁷ It was a matter of human judgment beyond the capabilities of computers. For the purposes of

the FAMC Closure Study and this study, members of the FAMC professional staff have been asked to utilize their clinical judgment in comparing specific procedures within their medical speciality in order to most accurately determine equivalency between UCA and CHAMPUS methods of calculating costs.

Objective Two: This study will determine the amount of cost savings (or loss) by each medical speciality. These results will then be presented in a descending array to allow rapid assimilation of cost differentials.

Objective Three: This study will determine if the capability exists to expand the services of the medical speciality in order to meet the demand created by a redirection of in CHAMPUS service. It will also determine if there is a need for expansion.

Objective Four: Of those expandable services, it will determine those which are in such demand by the beneficiary population that increased inpatient availability at FAMC would not require amendment of the CHAMPUS "forty mile" requirement.

CRITERIA

CRITERION ONE: Who can provide similar care at a lower overall cost to DoD, FAMC or CHAMPUS?

CRITERION TWO: Does FAMC have the capability to support additional patient workload if additional variable resources (i.e., personnel, and funds) are provided?

ASSUMPTIONS

ASSUMPTION ONE: There is an unmet demand for medical care in specialities at FAMC whose use, as opposed to sending patients to the civilian sector via CHAMPUS, would produce high cost savings.

ASSUMPTION TWO: Fitzsimons Army Medical Center can obtain resources in terms of money and manpower to expand its inpatient treatment capability to meet that demand.

ASSUMPTION THREE: That "health care finder" systems under the IMPRINT program will not prevent the transfer of patients in the civilian sector to FAMC inpatient services with the most cost savings.

ASSUMPTION FOUR: FAMC costs per bed day will remain relatively stable in relationship to the same costs per bed day by medical specialty in the civilian sector.

LIMITATIONS

LIMITATION ONE: This study will be limited to FAMC and its referral area in DoD Region III.

LIMITATION TWO: As Uniform Chart of Accounts data and CHAMPUS data are not based on similar or uniform cost assignment methodologies, the output costs for this study may not be totally verifiable or accurate.

LIMITATION THREE: The need for additional space will be a final limiting factor in this study since construction authorizations will take five years or longer to realize.

LIMITATION FOUR: Truly emergent cases can not be required or expected to get inpatient care only at FAMC. The rapidity of onset of illness or injury will preclude any type of referral base or voluntary travel by the patient.

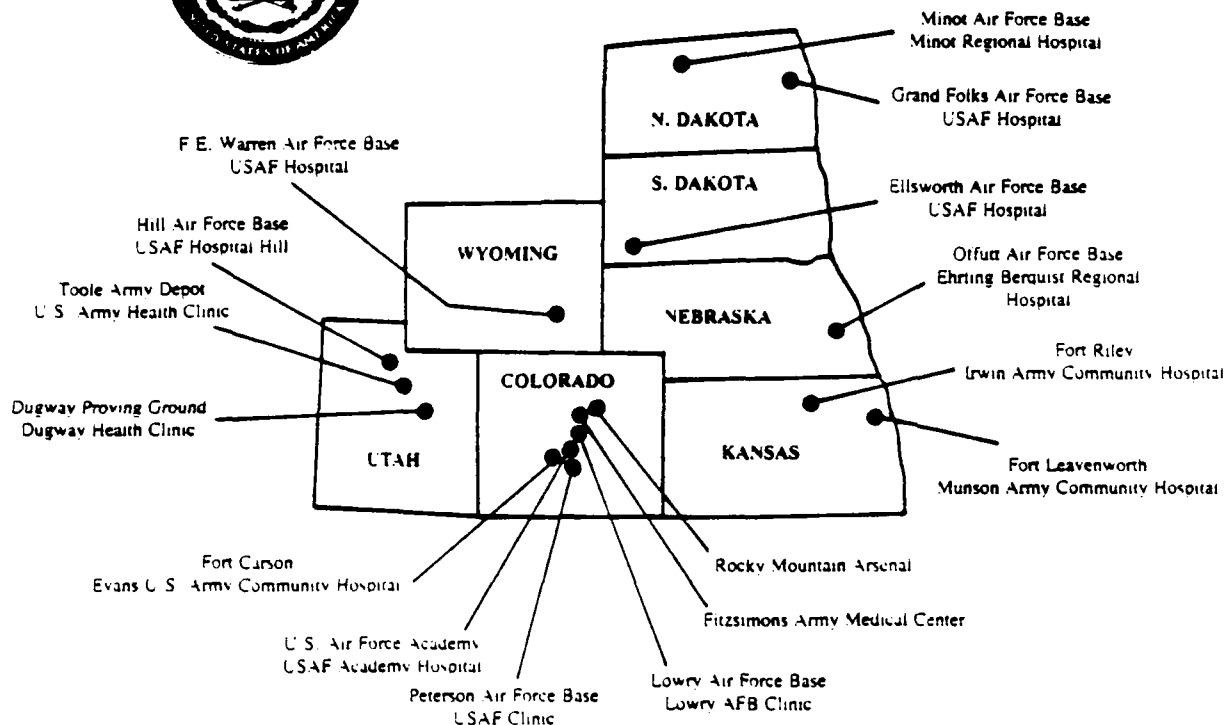
C. METHODOLOGIES

BACKGROUND

In FY 1984 FAMC provided 147,308 bed days of care. Approximately 42 per cent of the inpatient workload was provided to the beneficiaries residing with the FAMC catchment area (Denver metropolitan area). Approximately 13 per cent of the workload was to the beneficiaries residing in the Fort Carson catchment area with the remaining 45 per cent provided to beneficiaries residing in DoD Region III outside the Denver and Colorado Springs areas. This led to the decision to use DoD Region III costs, since this would best represent additional workload to be captured. Fitzsimons normally draws its referrals from this region and is familiar with the military medical facilities in it. Specialists from Fitzsimons routinely make consultant visits throughout the region on an annual basis. The Air Force Aero-Medical Evacuation system routinely picks up and delivers patients to and from Fitzsimons for DOD Region III. The area encompassed by DoD Region III is illustrated on the following page.



DoD Military Medical Region III



The DoD Military Medical Region III encompasses a seven-state area as illustrated in the map above. The figures represented below reflect the number of beds and eligible beneficiaries by category and state where they reside within the FAMC seven-state Health Services Region and is based on data received from the DEERS Support Office, Office of the Secretary of Defense. The data is based on enrolled beneficiaries as of Dec. 31, 1984.

NAME	NUMBER OF BEDS	STATE & TOTAL POPULATION ELIGIBLE FOR SERVICE
USAF Hospital	50	Wyoming 16,693
USAF Hospital Hill	15	
USA Health Clinic	11 (temp)	Utah 37,327
Dugway Health Clinic	0	
Evans USA Community Hospital	180	
USAF Academy Hospital	15	
USAF Clinic	0	Colorado 177,384
Lowry AFB Clinic	0	
Fitzsimons Army Medical Center	500	
Munson Army Community Hospital	70	
Irwin Army Community Hospital	120	Kansas 95,152
Ehring Berquist Regional Hospital	40	Nebraska 57,216
USAF Hospital	15	South Dakota 23,418
USAF Hospital	15	
Minot Regional Hospital	40	North Dakota 14,424

FIGURE 5

Illustration from The Stethoscope, Vol. 43, no.16, Fitzsimons Army Medical Center, Aurora, Colo 80045, August 14, 1986.

METHODOLOGY USED TO ESTABLISH EQUIVALENCY BETWEEN UCA AND CHAMPUS COSTS

The methodology used to equate Uniform Chart of Accounts (UCA) and CHAMPUS financial data was derived from the "Estimated Cost and Workload Impact on CHAMPUS Due To The Potential Closure of Fitzsimons Army Medical Center" study. The expected cost impact on CHAMPUS, in FY 1984 dollars, was also determined at the beneficiary and clinical speciality level, whenever possible by applying the detailed average (government) expenditure from the DoD Medical Region III CHAMPUS reports. Three special reports were developed to display this data: (1) emergency versus non-emergency care, (2) Special reports of surgical and non-surgical care, (3) special reports detailing all patient information including the ICDA-8 codes to determine the exact diagnoses. Examples of these comparisons are at Appendices A through C.

RESEARCH METHODOLOGY PROCEDURE

The first action was to dismiss the emergency medical care delivered under CHAMPUS. Because of the emergent nature of the care, there was no reasonable expectation that the workload indicated there could be captured by any military facility, much less FAMC, that might be 1000 miles away from the scene of an accident or dangerous medical sequelae. Thus the purged data base considered only "routine" inpatient medical care, theoretically those who could be transported via the aeromedical evacuation system or by other means

to Fitzsimons. In general the costs were lower for non-emergency medical care so this constituted the initial adjustment in costs that affected the clinical specialities. A summary of the information is shown in Table 5 which indicates the difference in CHAMPUS costs between emergency and non-emergency inpatient care per bed day and the number of beds which are utilized. The figures are calculated for patients other than dependents of active duty personnel, i.e., primarily retirees and was used for establishing the baseline decision not to include emergency care in the study. The other charts are not shown since the data was included in the output costs for other categories during the database manipulation without printing out the data sheets.

DIFFERENCES IN COST PER BED DAY
EMERGENCY VS. NON-EMERGENCY CARE DELIVERED BY CHAMPUS
FOR DEPENDENTS OF OTHER THAN ACTIVE DUTY

CLINICAL SPECIALTY	EMERGENCY		NON-EMERGENCY	
	AVG COST	DAYS	AVG COST	DAYS
Allergy	1061	14	1486	1
Cardiology	956	63	677	161
Dermatology	none		680	35
Endocrinology	334	10	278	144
Gastroenterology	654	70	370	725
Hematology	none		628	198
Infectious Disease	none		860	42
Nephrology	none		364	84
Neurology	1046	48	471	489
Nutritional	none		none	
Pulmonary/Resp.	739	83	377	293
Rheumatology	1870	1	389	502
Other	964	22	944	196
Dental	none		1256	24
Obstetrics	733	9	3735	4

Gynecology	831	4	319	1164
Ophthalmology	547	16	887	179
Psychiatry	none		none	
Special Peds	none		257	30
ENT	3388	1	558	461
Neurosurgery	859	214	300	925
Orthopedics	494	624	470	1449
Thoracic Surgery	449	91	288	303
Urology	446	53	434	857
AVERAGE TOTAL	\$700	2485	\$449	12897

As indicated by the average total cost, non-emergency patient care was lower. This, coupled with the impossibility of trying to capture emergency care led to the decision to discard emergency care data in calculating final costs.

The next step was to equate medical procedures performed by the private sector to those performed by the profession staff at Fitzsimons Army Medical Center. This is a complex issue since the private sector may bill CHAMPUS for several different procedures under the same diagnosis code. The first step was to divide the data base into surgical and non-surgical procedures. The indicators in some cases are very obvious, e.g. some of the medical specialties do not perform surgical procedures. In other cases it was much more complex because traditional non-surgical medical specialties have moved into the arena of performing what are listed as surgical procedures. This researcher met with the Service Chiefs of medical specialties at FAMC to determine which surgical/non-surgical care was considered a normal part of their specialty practice. An example of this is at Appendix B. If the

relative mix appeared normal to the Chief of the Medical Service the total overall average costs for surgical and non-surgical procedures were accepted as adequate. This task required a great deal of time to complete and raised the question in several areas as to the definition of the surgical/non-surgical procedures within some medical specialties. This then required returning to the data base in order to develop a list of the types of cases included within the medical specialty report. The lists (see Appendix) were then identified according to the ICD code, sorted by hand and then taken back to the Service Chiefs for additional review. In the majority of cases only minor adjustments were made as to the case mix per specialty noted in the CHAMPUS data base. In one case, Thoracic Surgery, all heart problems and surgical repair came under the code of "cardiac failure." The only way to identify if the person had bypass surgery was to determine if there had been operating room costs. Even then there was no direct delineation of costs between the Cardiology and Thoracic Surgery services. A study of the codes in the data base showed that most of the CHAMPUS data base cost information was attributable to lung surgery and not cardiac surgery. In this situation the final costs were determined by evaluating the cost of fifty actual cases that FAMC Thoracic Surgeons had referred to the civilian sector for care, and averaging the total CHAMPUS costs for these cases. This required entering each patient's name and social security number into the CHAMPUS data base and then securing the required information. Since many of the patients that were sent out from FAMC had other primary insurance carriers in addition to

CHAMPUS, this was one of the more questionable cost analyses and must be considered a conservative estimate of actual cost. Cardiology costs were determined by obtaining an average of those diagnoses that did not include an operation code indicating that a surgical procedure had performed, i.e., if a diagnosis included an operation code, the cost was considered to be within the realm of thoracic surgery as opposed to Cardiology. Other areas such as Podiatry and Orthopedic Surgery were not listed separately in the CHA' US database. Therefore, an estimation for each had to be made based on each Orthopedic procedure costs. The following chart (Figure 6) indicates the final results of the study.

**THE ESTIMATED CHAMPUS COST PER
INPATIENT DAY* BY HOSPITAL SPECIALTY**

ALL CATEGORIES OF BENEFICIARIES

<u>FAMC HOSPITAL DEPARTMENT</u>	<u>NON-SURG. ONLY</u>	<u>SURG. ONLY</u>	<u>SURG & NON SURG.</u>	<u>OTHER (SEE REF)</u>	<u>AVG. CHAMPUS COST/DAY</u>
Allergy/Immunology				1	\$ 434
Cardiology			X		773
Dermatology			X		555
Endocrinology	X				363
Gastroenterology			X		441
Hematology			X		511
Infectious Disease	X				614
Internal Medicine				2	423
Nephrology			X		537
Neurology	X				438
Oncology				3	511
Pulmonary/Respiratory			X		547
Rheumatology			X		487
Cardiovascular/Thoracic Surg.				4	1,100
Neurosurgery		X			550
Oral Surgery				5	1,315
Plastic Surgery				6	908
General Surgery		X			561
Urology			X		523
Gynecology			X		464
Obstetrics			X		881
Adolescent Pediatrics				7	650
Nursery				8	975
Pediatrics				9	650
Family Practice-Gynecology			X		464
Family Practice-Orthopedics			X		499
Orthopedics			X		499
Podiatry				10	499
Psychiatric/Psychology	X				242
Ophthalmology			X		859
Otorhinolaryngology			X		750

*Costs are based on FY 1984 CHAMPUS government expenditures per day for total inpatient care (hospital and professional services combined). Costs are based on JoD Medical Region III care for the appropriate specialties (unless otherwise specified) as indicated in the methodology section.

FIGURE 6

NOTES TO TABLE 6

DESCRIPTION OF "OTHER" METHODOLOGY
USED TO CALCULATE INPATIENT COST PER DAY

- 1 Allergy/Immunology: Weighted average of non-surgical care only for allergy.
- 2 Internal Medicine: Internal Medicine (other) - non-surgical care only.
- 3 Oncology: Same as hematology - weighted average of surgical/non-surgical care.
- 4 Cardiovascular/Thoracic Surgery: Calculated using special diagnosis and procedure codes for this type of surgery.
- 5 Oral Surgery: Used CHAMPUS dental - surgical care only.
- 6 Plastic Surgery: Calculated using special diagnosis and procedure codes for selected types of plastic surgery.
- 7 Adolescent Pediatrics: Weighted average of medical and surgical care for patients age 1 - 19 from the FY 1984 Cost & Workload report.
- 8 Nursery: Weighted average of medical and surgical care for patients less than age 1 from FY 1984 Cost & Workload report.
- 9 Pediatrics: Weighted average of medical and surgical care for patients age 1 - 19 from the FY 1984 Cost & Workload report.
- 10 Podiatry: Same as orthopedics - weighted average of surgical/non-surgical care per specific case type.

The foregoing data was the basis of the information that went into the FAMC Closure Study. Compilation of the data required approximately 360 manhours and \$25,000 worth of computer time to develop.²⁶ The obvious problem, as previously mentioned, is that the CHAMPUS data base was set up to capture costs that were submitted by the civilian sector in their billing procedures which differs from the Department of Defense method of computing costs. The methods employed have established a common data base which can be used to compare costs as accurately as possible.

The next step was to obtain the FY 1984 Uniform Chart of Accounts from the Directorate of Resources Management at Fitzsimons Army Medical Center. As shown on the table on the next page, Internal Medicine subspecialties are listed first. Surgical subspecialties constitute the second half, with miscellaneous areas completing the table. Later constructs will match these CHAMPUS and UCA medical subspecialties by cost differentials. Some areas will "fall out" such as nursery because CHAMPUS has no specific charge for that area. Because Obstetrics will not be an area proposed for increase, excluding the nursery will have little or no effect. The final UCA costs were:

UNIFORM CHART OF ACCOUNTS
COSTS BY MEDICAL SPECIALTY FY 1984
DIRECT PATIENT CARE INPATIENT SERVICES
IN COST PER BED DAY (EXTRACTED)

MEDICAL SPECIALTY	COST PER BED DAY		
Internal Medicine	\$ 542		
Cardiology	272		
Coronary Care	600		
Dermatology	208		
Endocrinology	1	9	3
Gastroenterology	209		
Hematology	201		
Intensive Care (Medical)	852		
Nephrology	210		
Neurology	238		
Oncology	197		
Pulmonary/Upper Respiratory Di	202		
Rheumatology	207		
General Surgery	298		
Cardiovascular and Thoracic Surgery	369		
Intensive Care (Surgical)	816		
Neurosurgery	337		
Ophthalmology	268		
Oral Surgery	554		
Otorhinolaryngology	267		
Pediatric Surgery	0		
Plastic Surgery	203		
Proctology	0		
Urology	286		
Gynecology	304		
Obstetrics	284		
Pediatrics	303		
Nursery	342		
Neonatal ICU	474		
Orthopedics	186		
Podiatry	782		
AVG TOTAL	281		

FIGURE 7

The data was surveyed to determine that enough of the medical specialties and their cost differentials matched to constitute a cost array. Initial drafts of the information revealed startling differentials that deserved full investigation. Rather than dealing with average cost per bed day for all medical care, it became evident that more useful information would be available by comparison of individual medical specialties. The comparison of this information is contained in the following section: Conclusions and Recommendations.

III. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

After final adjustments in CHAMPUS costs, a descending cost array was designed. This was accomplished by subtracting the FAMC UCA costs (which were generally smaller) from the CHAMPUS costs. Both costs were based on costs per bed day, for inpatient care. The descending array was set up to indicate the highest cost savings to the government at the top with actual losses at the bottom. The wide variation in costs, per specialty, paralleled those found in the civilian sector. There were certain specialties in which civilian care was actually less expensive than that provided by the government. The extreme variation in costs were startling. The next objective of this study was then undertaken. This was to determine which specialties could increase patient load if the support staff were made available, in particular, to those specialties in which greater cost savings could be realized. A common complaint heard in all surgical specialties is that there isn't enough operating room (OR) time and enough beds to support the demand for surgery. This study will demonstrate that with additional support personnel, FAMC could provide the needed bed space and OR time requested.

The table in Figure 8 on the following page describes by specialty the cost differentials between CHAMPUS and FAMC.

**COST SAVINGS OR LOSS PER BED DAY
CHAMPUS COSTS COMPARED TO UCA COSTS 1984
IN DESCENDING ORDER OF COST SAVINGS
PER BED DAY**

MEDICAL SPECIALITY	CHAMPUS COST ALL BENEFICIARIES	FAMC UCA COSTS	SAVINGS TO GOVERNMENT
Oral Surgery	1315	553	762
Cardio-Thoracic Surgery	1100	369	731 *1
Plastic Surgery	908	202	706
Obstetrics	881	284	597
Ophthalmology	859	267	592
Otorhinolaryngology	780	236	544
Nursery (NICU)	875	341	534
Adolescent Pediatrics	650	303	347
Pulmonary/Respiratory	547	201	346
Nephrology	537	210	327
Oncology	511	196	315
Orthopedics	499	185	314
Hematology	511	201	310
Dermatology	555	208	283
General Surgery	561	298	263
Urology	523	285	238
Gastroenterology	441	209	232
Neurosurgery	550	336	214
Neurology	438	237	201
Rheumatology	407	207	200
Endocrinology	363	193	170
Gynecology	464	304	160
Infectious Disease	614	542 *2	72
Psychiatry/Psychology	242	315	-73
Allergy/Immunology	434	542 *2	-108
Internal Medicine	423	542 *2	-119

FIGURE 8

*1 Special Note. Due to complexities of extracting data cardiac care was not calculated. In a review of Cardio-Thoracic data it appeared that the costs would be approximately the same, i.e., a cost saving of approximately \$800 a day would be possible.

**2 Because of cost pooling in the Department of Medicine the costs of Infectious Disease, Allergy/Immunology and Internal Medicine are the same. This is believed to be reasonably accurate.

This descending array indicates the areas that have the greatest cost savings for the government at the top. In the negative areas, it indicates those where the government loses money, although these may be needed to support functions in conjunction with those areas that generate a positive cost savings.

BED OCCUPANCY

The normal standard for hospital occupancy is to have 85% of the total hospital beds occupied by patients. Some hospitals operate at a higher percentage. Generally, the higher the percentage of occupancy, the more efficient the hospital is considered. For the purpose of this study the 85% rate is used.^{28/29} The following chart, constructed with data from the American Hospital Association, indicates the average bed occupancy rate by size of hospital in 1983.³⁰

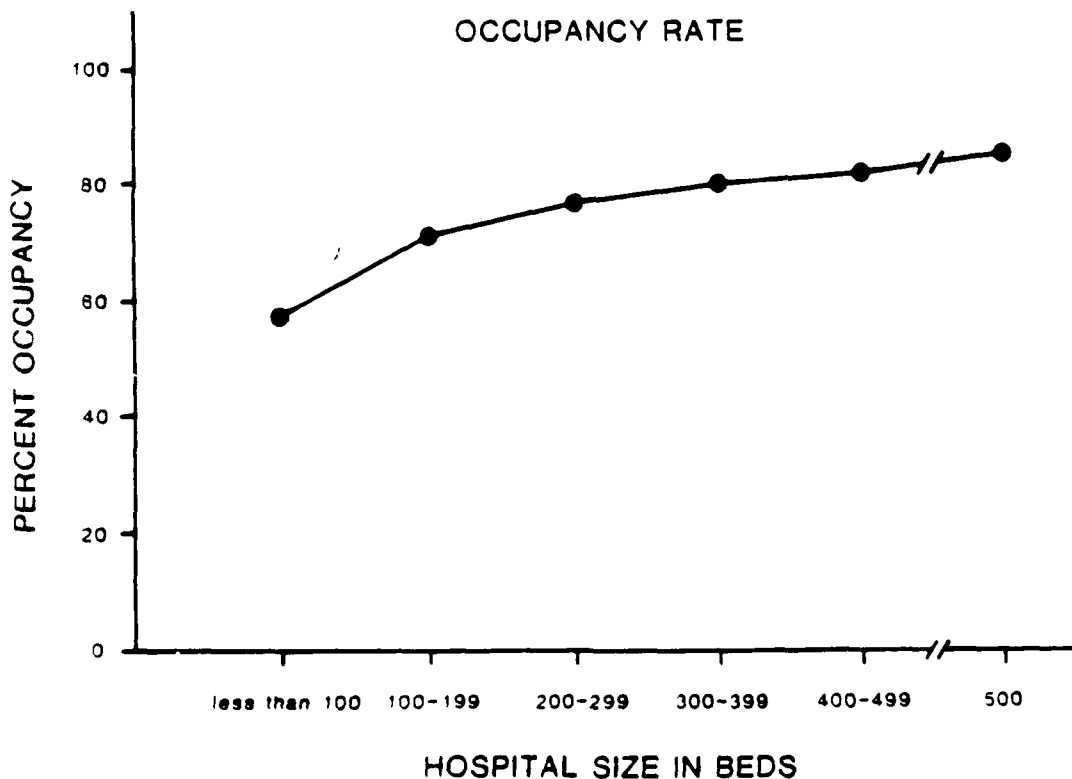


FIGURE 9

The year used for the Fitzsimons occupancy rate calculations was calendar year 1985, the year immediately following the financial analysis on the preceding pages. During the calendar year, FAMC had to "cap" or put artificial restrictions on the number of beds that could be occupied due to shortages of nursing personnel at various times during the year. There was some impact due to construction, but this had little effect on available beds because the loss due to construction could have been compensated for with adequate staffing.

The average number of "physical" beds available to Fitzsimons Army Medical Center during calendar year 1985 was 502. However, due to support staffing shortages, the hospital was only able to fill an average of 370 beds per day. Calculated out, this represents a 74% occupancy rate, 11% below what is considered optimal. This means the hospital should have been able to fill 57 more beds per day but couldn't primarily due to staffing constraints. The chart on the following page graphically indicates the occupancy rate differences.

**BED OCCUPANCY RATE AT FITZSIMONS ARMY MEDICAL CENTER
ILLUSTRATING AN AVERAGE 57 BED UNDERUTILIZATION PER DAY**

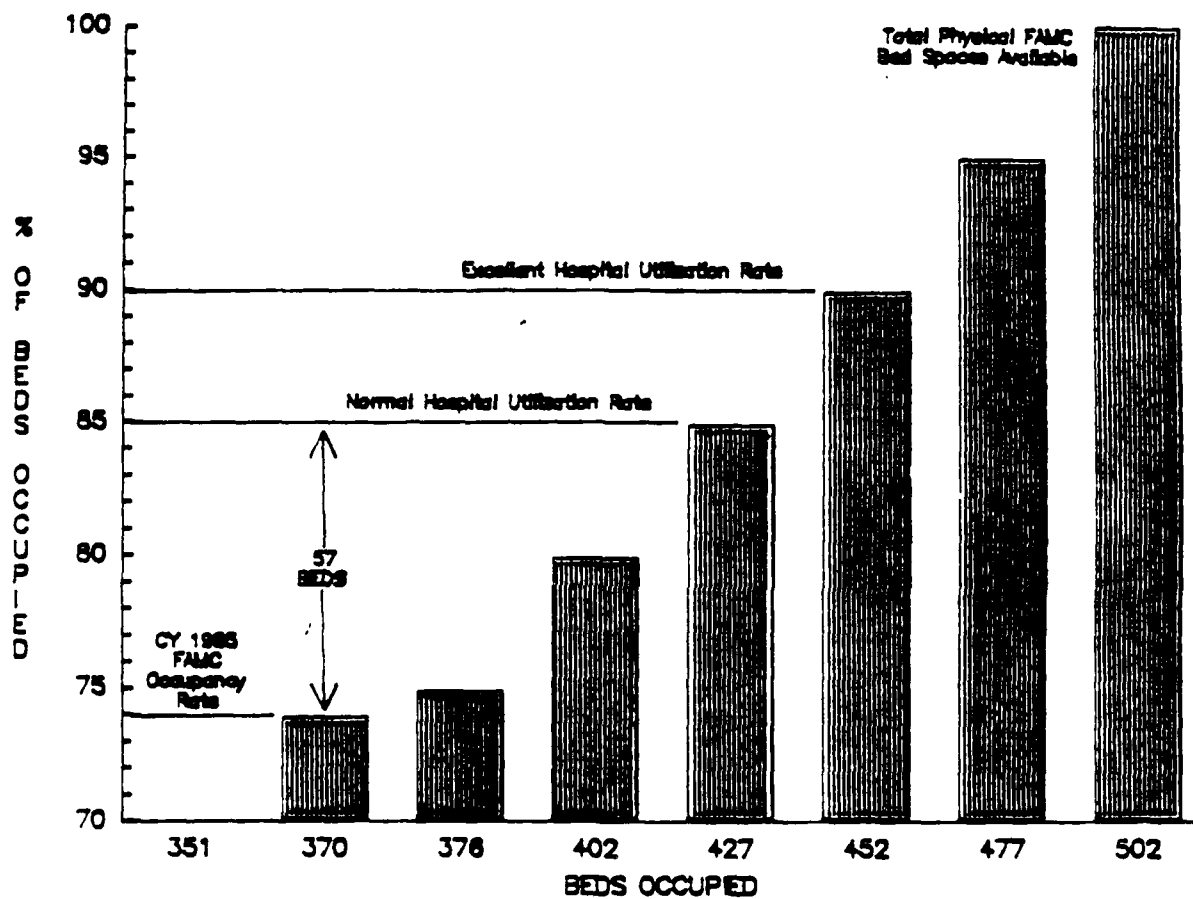


FIGURE 10

B. APPLICATION OF INFORMATION

The descending cost array was carried over into a cost analysis model. The next step was to contact the Service Chief of each specialty and determine if he could increase his average patient bed days with his current professional staff. The variable given to them was that they would receive additional funding and support staff in terms of nursing and administrative support. No increases in physical plant were in the projection. Additional funding included expendable medical supplies and minor equipment (Capital Expense Equipment under \$5000). Both additional funding and staffing are expected to be covered by the UCA cost per bed day. Only one medical subspecialty, Thoracic Surgery indicated they would need another physician on their staff since they were nearing maximum capability. The majority of the surgical services indicated that the main restriction on their provision of additional surgical services was operating room time availability. This was determined to be a problem of adequate staffing, i.e., given enough personnel the operating rooms could function for longer periods of time and allow more surgery to be performed. If this restriction were to be overcome additional nursing staff would be needed on the wards to care for the increased number of post-surgical patients. The following chart indicates the estimate of possible cost savings.

**DEMONSTRATION MODEL OF
COST SAVINGS PER DAY POSSIBLE BASED ON
FILLING 57 UNOCCUPIED BEDS PER DAY**

MEDICAL SPECIALTY	NUMBER OF ADD'TL PATIENTS PER DAY POSSIBLE	SAVINGS PER BED DAY	EXTENDED COST SAVINGS	NOTES
Oral Surgery	0	762	0	1
Cardio-Thoracic Surgery	4	731	2924	2
Plastic Surgery	0	706	0	3
Obstetrics	0	597	0	4
Ophthalmology	10	592	5920	
Otorhinolaryngology	9	544	4896	
Nursery (NICU)	6	534	3204	5
Adolescent Peds	5	347	1735	
Pulmonary/Respiratory	0	346	0	4
Nephrology	6	327	1962	
Oncology	5	315	1575	
Orthopedics	5	314	1570	
Hematology	0	310	0	6
Dermatology	0	283	0	
General Surgery	10 (-3)	263	1841	7

57 occupied bed days = \$25,637 per day

annual savings = \$9,357,505

Urology	10	238	2380	
Gastroenterology	5	232	1160	
Neurosurgery	0	214	0	4
Neurology	0	201	0	6
Rheumatology	0	200	0	6
Endocrinology	0	170	0	6
Gynecology	6	160	960	
Infectious Disease	unk	72	unk	8
Others				9

NOTES:

1. Oral Surgery was not considered for this study because in 1984 there were only 13 bed days of care paid for by CHAMPUS in CoD Region III and all of those were emergencies. It would not be feasible to transport these emergencies (probably vehicular accidents) to Denver for care.

2. One additional Cardio-Thoracic Surgeon needed.
3. Plastic Surgery was not considered for this study because in 1984 there were only 28 days of care paid for by CHAMPUS in DoD Region III and all of those were emergencies. Plastic Surgery at Fitzsimons Army Medical Center essentially takes care of all reconstructive care required in DoD Region III.
4. Not considered for this study because the majority of the care is emergent in nature and could not be transported to Denver from throughout DoD Region III.
5. A means of transport has been proposed for neonates. If accepted this would allow more neonates to be treated.
6. The chiefs of these services, in general, indicated that it would be counterproductive to attempt to treat their patients at Fitzsimons. It would be more cost effective to treat them in their local communities. There was also some doubt that enough referrals could be solicited.
7. The 3 patients (average bed days) subtracted were to bring the number of patients to 57.
8. The Infectious Disease Service recently began treating AIDS patients. This has affected the costs of this service. No current estimates can be made.
9. No cost modeling was done on services that "lost" money. No consideration is given to reducing these services because they are essential to hospital function. It is an accepted fact in most hospitals that Internal Medicine is not a "big money maker." However they are essential because they are one of the primary consulting and referral services in any hospital.

C. SUMMARY

A projected savings of over 9 million dollars a year, by one Army Medical Center, is certainly a concept that deserves additional strategic planning. With the fourth stage of epidemiologic transition, the age of delayed diseases coming into effect, the demand for medical care will continue to grow.³¹ Despite fewer hospital admissions, Medicare cost containment efforts and a low inflation rate this years national health care expenditures are expected to rise 10% to \$511.9 billion dollars.³² The Department of Defense health care system will have to pay these same increases. The result will probably be less health care delivered to retirees and their dependents unless strategic planning, budgeting and marketing are done by the military medical facilities. Past staffing policies which base the number of personnel on average workload have not taken into consideration systemic limitations in the military hospital. A prime example of this is operating room staffing vs. ward staffing. If there are not enough ward nurses to take care of "thru put" from the operating room, the operating room staff is limited. If the Operating room staff is not large enough there are not enough surgical patients generated to warrant increasing the "average" staffing of the wards. Our system has become trapped in a "which came first syndrome" of staffing that has resulted in a lack of optimal staffing and funding to save the Department of Defense money.

A projected example of this is the Ophthalmology Service which can

provide surgical care for an additional 10 patients a day if support staff were provided. To do this they will require two more operating room nurses, one more nurse anesthetist, four ward nurses and four ancillary personnel. Total annual personnel costs would increase about \$300,000. Supply costs are estimated at \$100 per bed day, which includes surgical supplies, such as intraocular lenses, and ward supplies. In annualized costs this comes to \$365,000. No additional surgical lasers or other equipment are needed. The total increased annual costs of \$665,000 are more than covered by UCA costs of \$974,550 ($10 \times \267×365). The annual CHAMPUS costs for this care would be a staggering \$3,135,350 ($10 \times \859×365). The cost savings to the government could be \$2,160,800 annually. Because the hospital is under utilized no increases in fixed facilities would be necessary.

Some of the implications of the Department of Defense planned IMPRINT program will make strategic decisions such as are proposed in this paper easier. Some limitations such as a nationwide shortage of nurses³³ may make it more difficult. Any proposal to shift patient workload to or from military medical facilities should include a cost analysis. Criticisms of the Uniform Chart of Accounts should be based on a strategic outlook rather than microscopic accounting techniques. Goal setting should be based on adequate resources to provide the best quality patient care possible (which the military system does), not just budget limitations. Only by such strategic overviews can we continue to provide the best medical care in the world and save money at the same time.

D. RECOMMENDATION

That Fitzsimons Army Medical Center eventually be resourced to provide care at the 85% occupancy level. The fixed costs such as facilities, utilities and equipment will essentially remain constant. This can be approached incrementally by having increases of patients in specific specialties and capturing exact cost information. Three of the highest cost savings (to the government) specialties that would be best to initiate such actions would be:

MEDICAL SPECIALTY	ADD'TL PATIENTS PER DAY POSSIBLE	SAVINGS PER BED DAY	PROJECTED ANNUAL COST SAVINGS
Ophthalmology	10	\$592	\$2,160,800
Otorhinolaryngology	9	\$544	\$1,787,040
Cardio-Thoracic Surgery	4	\$731	\$1,067,260

By initiating cost savings studies in these three specialties and specifically re-capturing CHAMPUS workload related to them it can be verified that the government can save a significant amount of money. If studies in these three areas prove productive a full implementation of a program to maintain the hospital at a selected 85% occupancy rate could be undertaken. In this manner it could be determined if the \$9,357,505 savings projected on page 47 are feasible.

FOOTNOTES

- ¹ Paul Starr, The Social Transformation of American Medicine (New York: Basic Books, Inc., 1982), pp. 240-241
- ² Marshall W. Raffel, The U.S. Health System: Origins and Functions (New York: John Wiley and Sons, 1980), pp. 225
- ³ Ibid., pp. 225-234
- ⁴ "OMB Invites HEW to Help Cut DoD," U.S. Medicine (September, 1973): 24
- ⁵ Steven Jonas, Health Care Delivery in the United States (New York: Springer Publishing Company, 1981), pp. 326-327.
- ⁶ Raffel, p. 243.
- ⁷ Jonas, pp. 329-332
- ⁸ Neil MacNeil and Harold W. Metz, The Hoover Report 1953 - 1955 (New York: The MacMillan Co., 1956), p. 178-180.
- ⁹ "Grace Commission Will Be 'Blueprint'," U.S. Medicine (February 15, 1984): 13.
- ¹⁰ Raffel, pp. 538-549.
- ¹¹ "All PHS Hospitals Set For Transition," U.S. Medicine (November 15, 1981): 1.

"Budget Cut Hits PHS; Hospital Plans Falter," U.S. Medicine (October 15, 1981): 1.

"HHS Transition: No Doubts Aired," U.S. Medicine (February 1, 1981): 41.

"Merger of PHS Corps Mean Pay Cuts," U.S. Medicine (May 1, 1981): 1.

"PHS Corps Again on OMB 'Hit List'," U.S. Medicine (January 1, 1982): 1.

"PHS Corps Again Questioned," U.S. Medicine (January 1, 1982): 20.
"PHS Officials Analyzing 31 Plans For Transition of Hospitals, Clinics," U.S. Medicine (September 15, 1981): 3.

- 12 Memorandum of Understanding Between DoA, Office of the Surgeon General and DoD, OCHAMPUS, (September 7, 1983).
- 13 "Charge for Outpatients Could Save \$2 Billion," HSC Mercury (May 1984):1.
- 14 Richard W. Hunter, Ph.D. and Benjamin R. Baker, M.D., Defense Health Agency Feasibility Study (Washington, D.C: Systems Research and Applications Corporation; Delphic Concepts, Inc., April 22, 1983): 5-3.
- 15 "PHS Officials Analyzing 31 Plans . . .," pp. 1, 3.
- 16 Hearings On CHAMPUS and Military Health Care Before Subcommittee No. 2 of the Committee on Armed Services House of Representatives Ninety-Third Congress, Second Session, H.A.S.C. No. 93-701, Hearings held October 26, November 2, 3, 8, 9, and 11, 1974: pp. 2-3.
- 17 Columbia University School of Public Health and Administrative Medicine, Military Medicare (June, 1969): pp. 45-46.
- 18 Review of the Health Benefits Program of the Armed Forces Hearings before House Subcommittee on Supplemental Service Benefits, First Session, December 3, 4, 9, 1969 (Washington, D.C., U.S. Government Printing Office, 1970): pp.5298-5291.
- 19 Information Systems Division, Statistics Branch, Department of Defense, Office of Civilian and Medical Program of the Uniformed Services, Aurora, Colorado. July, 1985.
- 20 Senate Hearing before the Committee on Appropriations, Department of Defense Appropriations, H.R. 6329/S. 3026: pp.494, 503.
- 21 "Final Report Review of Policy on Certification of Nonavailability of Military Medical Services," (Maryland: Applied Management Sciences): pp. 1-3.
- 22 "CHAMPUS Faces Major Budget Deficit," U.S. Medicine (July 1986): pp. 1.
- 23 "Primary Care Focus Shifting," U.S. Medicine (June 1986): pp. 1.
- 24 "Final Cost of IMPRINT Seen Not Outstripping CHAMPUS," U.S. Medicine (August 1986): pp. 1.
- 25 "Congress May Limit IMPRINT's Scope," U.S. Medicine (August 1986): pp. 1.
- 26 "Defense Dept. seeks contractors on scaled-back CHAMPUS reform." American Medical News, pg. 3, March 13, 1987.

- 27 Information Systems Division, Statistics Branch, Department of Defense, Office of Civilian and Medical Program of the Uniformed Services, Aurora, Colorado. July, 1985.
- 28 Information Systems Division, Statistics Branch, Department of Defense, Office of Civilian and Medical Programs of the Uniformed Services, Aurora, Colorado, October, 1986.
- 29 McGibony, John R., M.D., Principles of Hospital Administration, 2nd Ed. P. 35: New York, New York, G.P. Putnam's Sons, 1969.
- 30 Benfer, David W.; Spirn, Steven (Editors). Issues in Health Care Management. London, England, 1982.
- 31 Axelrod, Solomon J.; Donabedian, Avedis; Lichtenstein, Richard L.; Myers, Beverlee A.; Wyszewianski, Leon. Medical Care Chartbook (8th Ed.): Ann Arbor, Michigan. Health Administration Press, 1986.
- 32 "The Fourth Stage of the Epidemiologic Transition: The Age of Delayed Degenerative Diseases," The Milbank Quarterly, Cambridge University Press.
- 33 "Budget 'bankrupts' health care policy," AHA News, January 12, 1987.

BIBLIOGRAPHY

BOOKS:

Axelrod, Solomon J.; Donabedian, Avedis; Lichtenstein, Richard L.; Myers, Beverlee A.; Wyszewianski, Leon. Medical Care Chartbook (8th Ed.):

Ibid., pp. 225-234

McGibony, John R., M.D., Principles of Hospital Administration, 2nd Ed. p. 35: New York, G.P. Putnam's Sons, 1969.

Marshall W. Raffel, The U.S. Health System: Origins and Functions (New York: John Wiley and Sons, 1980), pp.225, Raffel, p. 243.

Paul Starr, The Social Transformation of American Medicine (New York: Basic Books, Inc., 1982), pp. 240-241.

Steven Jonas, Health Care Delivery in the United States (New York: Springer Publishing Company, 1981), pp. 326-327, pp.329-332.

PERIODICALS:

"All PHS Hospitals Set for Transition, "U.S. Medicine (November 15, 1981): 1.

Altman, Stuart H., Ph.D., "Cost Cost go away, is capitation here to stay?" Healthcare Financial Management, (March 1987), p.23

Andies, George H. Jr., "Venture Capitalism at the Veterans Administration", Hospital & Health Services Administration, (Nov. and Dec. 1986), p. 25.

Anderson, Gerard F., Health Affairs, Fall 1986, "Data Watch, 'National Medical Care Spending'", p. 123.

Andries, George H., "Venture Capitalism at the Veterans Administration", Hospital & Health Service Administration, (Nov/Dec 1986) p. 25.

Benfer, David W.; Spirn, Steven (Editors). Issues in Health Care Management. London, England, 1982.

Blodgett, Richard, "How to Tame Rising Health Care Costs", Business Week, (Nov. 26, 1984), Special Advertising Section

Buller, Paul F, and Timpson, Ladd, "The Strategic Management of Hospitals", Health Care Management Review , (Spring 1986) P.7.

"Budget 'bankrupts' health care policy," AHA News, January 12, 1987.

"Budget Cut Hits PHS; Hospital Plans Falter," U.S. Medicine(October 15, 1981): 1.

"CHAMPUS Faces Major Budget Deficit," U.S. Medicine (July 1986): pp. 1.

"Charge for Outpatients Could Save \$2 Billion," HSC Mercury (May 1984):1.

"Congress May Limit IMPRINT'S Scope," U.S. Medicine (August 1986): pp. 1.

"Defense Chief Urges Dependent-care Curbs at Military Hospitals", Denver Post, Sep. 17, 1985. (p. 8a)

"Defense Dept. seeks Contractors on Scaled-back CHAMPUS Reform", American Medical News, (Mar. 13, 1987), p.3.

"DoD Medical Budgets Centralized", U.S. Medicine, Apr. 1986, p.3.

"DoD's Bed Stays Seen At Norm", U.S. Medicine, May 1986, p.14.

"Final Cost of IMPRINT Seen Not Outstripping CHAMPUS," U.S. Medicine (August 1986): pp. 1.

"The Fourth Stage of the Epidemiologic Transition: The age of Delayed Degenerative Diseases," The Milbank Quarterly, Cambridge University Press.

Garrison, Louis P., Jr., and Wilensky, Gail R., Health Affairs, "Cost Containment and Technology", Summer 1986.

"Grace Commission Will Be 'Blueprint', U.S. Medicine (February 15, 1984): 13

"Grace Firm Uses Tax Breaks, Subsidies", Uniformed Services Journal, (May/June 1985) p.6.

"Health Benefit Costs Still Rising", Medical World News, (Feb. 23, 1987), p. 18.

"HHS Transition: No Doubts Aired," U.S. Medicine (February 1 1981): 41.

"ICD-9-CM Code and Coding Practice Changes for Case Mix Measurement", American Medical Record Association Journal, (March 1986), p.29.

"Imprint", U.S. Medicine, June 1986, p. 1.

"Introduction to a Decade of Transition" , Journal of Health Politics, Policy

and Law, (Vol II, No.4) Brown, Lawrence D.

Levinsky, Norman G. and Summers, Christina Hoff, "Health Care for Veterans: The Moral Obligations", Hastings Center Report, (Aug. 1986), p. 10.

Mayer, William, M.D., and Becker, Quinn H., "Mayer on CHAMPUS-Becker on Initiatives", AUSA NEWS, December, 1986.

McIlrath. "Defense Dept. Seeks Contractors on Scaled-back CHAMPUS reform". American Medical News, (March 13, 1987): p. 3.

"Merger of PHS Corps Mean Pay Cuts," U.S. Medicine (May 1 1981): 1.

"Numbers Invade the Art of Medicine", Medical World News, (Mar. 9, 1987), p.38.

"OMB Invites HEW to Help Cut DoD," U.S. Medicine (September, 1973): 24.

"PHS Corps Again on OMB 'Hit List'," U.S. Medicine (January 1, 1982): 1.

"PHS Officials Analyzing 31 Plans....," pp. 1,3.

"PHS Corps Again Questioned," U.S. Medicine (January 1, 1982): 20.

"PHS Officials Analyzing 31 Plans For Transition of Hospitals, Clinics," U.S. Medicine (September 15, 1981): 3.

Rosenstein, Alan H., Hospital Closure or Survival: Formula for Success", Health Care Management Review, (Summer 1986), p.29.

Schlesinger, Mark, and Wetle, Terrie, Health Affairs, Summer 1986., "The Elderly: New Directions for Change", p. 59

"A Severe Case of Swelling Expenses", Insight, Feb. 9, 1987. p. 52.

Smith, Edward P., USA, Ret., " Health Care Reform", AUSA NEWS, (Sep. 1986), p. 12.

Smith, Paul. "CHAMPUS Cuts Force Military Hospital Use." Army Times, 22 Nov. 1982 pp. 1,30.

"CHAMPUS Tests New Nonavailability Policy" Army Times, 7 Feb. 83, p. 13.

"CHAMPUS Use Curbs Proposed to Services." Army Times, 8 Nov. 82, p. 1.

"36% Increase Sought in CHAMPUS Budget." Army Times, 14 Feb. 83, p. 7

"Primary Care Focus Shifting," U.S. Medicine (June 1986):p. 1.

"The Stethoscope", (August 14, 1986), pp.1-12.

Tomich, Nancy, "CHAMPUS Faces Major Budget Deficit",U.S. Medicine, (July 1986), p.1.

U.S. GOVERNMENT DOCUMENTS

Columbia University School of Public Health and Administrative Medicine, Military Medicare (June, 1969): pp. 45-46.

"CHAMPUS Chartbook of Statistics", (March 1985)

"CHAMPUS Inpatient Cost and Workload Data for The Army Catchment Areas", Statistics Branch Information Systems Division OCHAMPUS.

"CHAMPUS and Military Health Care", Hearings Held Oct. 26, Nov. 2,3,8,9, and 11, 1974.

"CHAMPUS Dental Hearings",U.S. Government Printing Office Washington, D.C., (June 18 and Sep 15, 1980)

"Defense Resource Management Study", Final Report (Feb. 1979)

"Department of Defense Appropriations for 1984", Part 3, U.S. Government Printing Office, Washington, D.C., 1983

"Department of Defense Appropriations, Fiscal Year 1985", U.S. Government Printing Office, Washington, D.C 1984,

Cooney, David M., "A Study of Factors Relating CHAMPUS Structure, Effectiveness and Communications", (Jan. 1981)

"Cost and Workload Impact on CHAMPUS Due to Potential Closure Of Fitzsimons Army Medical Center",Statistics Branch Information Systems Division OCHAMPUS

"DCSPER Retiree Mobilization Conference", Reserve Components Personnel and Administration Center, St. Louis, Mo., Sep.83

"DOD Statistical Report on the Military Retirement System", Office of Actuary, Defense Manpower Data Center RCS No. DDM (A) 1375

"Final Report Review of Policy on Certification of Nonavailability of Military Medical Services," (Maryland: Applied Management Sciences): pp. 1-3.

Hunter, Richard W., Ph.D. and Baker, Benjamin R., M.D., Defense Health Agency Feasibility Study (Washington, D.C.: Systems Research and Applications Corporation; Delphic Concepts, Inc., April 22, 1983): pp. 5-3.

Hearings On CHAMPUS and Military Health Care Before Sub-committee No. 2 of the Committee on Armed Services House of Representatives Ninety-Third Congress, Second Session, H.A.S.C. No. 93-701, Hearings held October 26, November 2, 3, 8, 9, and 11, 1974: pp. 2-3.

Memorandum of Understanding Between DoA, Office of the Surgeon General and DoD, OCHAMPUS, (September 7, 1983).

MacNeil, Neil and Metz, The Hoover Report 1953 - 1955 (New York: The MacMillan Co., 1956) pp. 178-180.

"Military Compensation Background Papers", Department of Defense Office of the Secretary of Defense, Second Edition, July 1982.

"Military Medicare", Van Dyke, Frank, Elliott, Robin, (June 1969)

"Review of the Health Benefits Program of the Armed Forces Hearings", U.S. Government Printing Office, Washington, D.C., (1970).

Review of the Health Benefits Program of the Armed Forces Hearings Before House Subcommittee on Supplemental Service Benefits, First Session, December 3, 4, 9, 1969 (Washington, D.C., U.S. Government Printing Office, 1970): pp. 5298-5291.

Senate Hearing Before the Committee on Appropriations, Department of Defense Appropriations, H.R. 6329/S. 3026: pp. 494, 503.

OTHER REFERENCES

Information Systems Division, Statistics Branch, Department of Defense, Office of Civilian and Medical Program of the Uniformed Services, Aurora, Colorado. July, 1985.

Information Systems Division, Statistics Branch, Department of Defense, Office of Civilian and Medical Programs of the Uniformed Services, Aurora, Colorado. October, 1986.

APPENDIX A

EMERGENCY VS. NON-EMERGENCY CARE

HOSPITAL DEPARTMENT - SURGERY

EAR, NOSE, THROAT

GENERAL SURGERY

	1983	1984	PERCENT CHANGE	1983	1984	PERCENT CHANGE
EMERGENCY CARE						
1. CLAIMS	0	16	.	0	115	.
2. GOVERNMENT COST	0	39,441	.	0	251,130	.
3. ADMISSIONS	0	5	.	0	36	.
4. AVG GOVERNMENT COST PER ADMISSION	0	7,898	.	0	6,976	.
5. HOSPITAL DAYS	0	25	.	0	185	.
6. AVG GOVERNMENT COST PER DAY	0	1,578	.	0	1,357	.

NON-EMERGENCY CARE

1. CLAIMS	0	989	.	0	485	.
2. GOVERNMENT COST	0	670,788	.	0	693,400	.
3. ADMISSIONS	0	372	.	0	159	.
4. AVG GOVERNMENT COST PER ADMISSION	0	1,803	.	0	5,619	.
5. HOSPITAL DAYS	0	608	.	0	896	.
6. AVG GOVERNMENT COST PER DAY	0	1,103	.	0	997	.

TOTAL ALL CARE

1. CLAIMS	0	1,005	.	0	600	.
2. GOVERNMENT COST	0	710,229	.	0	1,144,531	.
3. ADMISSIONS	0	377	.	0	195	.
4. AVG GOVERNMENT COST PER ADMISSION	0	1,834	.	0	5,869	.
5. HOSPITAL DAYS	0	633	.	0	1,081	.
6. AVG GOVERNMENT COST PER DAY	0	1,122	.	0	1,059	.

DATE OF RUN 06/14/35
 CHAMPUS INPATIENT CARE IN
 REGION 3
 FOR CARE RECEIVED IN FY 1933 AND FY 1984 WITH AN 16 MONTH PROCESSING PERIOD
 FOR EACH RESPECTIVE YEAR BASED ON THE 5 DIGIT RESIDENCE ZIP CODE OF THE BENEFICIARY

HOSPITAL DEPARTMENT - SURGERY					
EAR, NOSE, THROAT					
	1983	1984	PERCENT CHANGE	1983	1984
EMERGENCY CARE					
1. CLAIMS	U	25	.	0	113
2. GOVERNMENT COST	U	16,101	.	0	153,873
3. ADMISSIONS	U	6	.	0	20
4. AVG GOVERNMENT COST PER ADMISSION	U	2,703	.	0	5,913
5. HOSPITAL DAYS	U	13	.	0	159
6. AVG GOVERNMENT COST PER DAY	U	1,091	.	0	700
NON-EMERGENCY CARE					
1. CLAIMS	U	204	.	0	348
2. GOVERNMENT COST	U	54,803	.	0	519,309
3. ADMISSIONS	U	30	.	0	85
4. AVG GOVERNMENT COST PER ADMISSION	U	1,826	.	0	6,110
5. HOSPITAL DAYS	U	118	.	0	498
6. AVG GOVERNMENT COST PER DAY	U	424	.	0	1,043
TOTAL ALL CARE					
1. CLAIMS	U	229	.	0	461
2. GOVERNMENT COST	U	68,904	.	0	673,182
3. ADMISSIONS	U	36	.	0	111
4. AVG GOVERNMENT COST PER ADMISSION	U	1,912	.	0	6,205
5. HOSPITAL DAYS	U	131	.	0	657
6. AVG GOVERNMENT COST PER DAY	U	527	.	0	1,025

APPENDIX B
SPECIAL REPORTS OF
SURGICAL AND NON-SURGICAL CARE

***** CATEGORY OF CARE - INTERNAL MEDICINE *****

I INPATIENT HOSPITAL SERVICES				PULMONARY/ RESPIRATORY				RHEUMATOLOGY				OTHER			
INFECTION/DISEASE				NEUROLOGY				NUTRITIONAL							
NEPHROLOGY															
USER BENEFICIARIES															
DEPT OF ACT DUTY SPONSOR															
RETIREE															
DEPT OF RET OR DEC SPONSOR															
TOTAL HOSPITAL ADMISSIONS															
MOSITAL DAYS															
AVERAGE LENGTH OF STAY (DAYS)															
AVERAGE DAILY PATIENT LOAD															
TOTAL GOVERNMENT COST															
TOTAL PATIENT COST															
TOTAL GOVT AND PATIENT COST															
AVG GOVT COST PER ADMISSION															
AVG GOVT COST PER DAY															
II INPATIENT PROFESSIONAL SERVICES															
USER BENEFICIARIES															
DEPT OF ACT DUTY SPONSOR															
RETIREE															
DEPT OF RET OR DEC SPONSOR															
NUMBER OF VISITS															
NUMBER OF NON-VISIT SERVICES															
TOTAL GOVERNMENT COST															
TOTAL PATIENT COST															
TOTAL GOVT AND PATIENT COST															
AVG GOVT COST PER ADMISSION															
AVG GOVT COST PER DAY															
III TOTAL INPATIENT SERVICES															
USER BENEFICIARIES															
DEPT OF ACT DUTY SPONSOR															
RETIREE															
DEPT OF RET OR DEC SPONSOR															
NUMBER OF VISITS															
NUMBER OF NON-VISIT SERVICES															
TOTAL GOVERNMENT COST															
TOTAL PATIENT COST															
TOTAL GOVT AND PATIENT COST															
AVG GOVT COST PER ADMISSION															
AVG GOVT COST PER DAY															
IV OUTPATIENT PROFESSIONAL SERVICES															
USER BENEFICIARIES															
DEPT OF ACT DUTY SPONSOR															
RETIREE															
DEPT OF RET OR DEC SPONSOR															
NUMBER OF VISITS															
NUMBER OF NON-VISIT SERVICES															
TOTAL GOVERNMENT COST															
TOTAL PATIENT COST															
TOTAL GOVT AND PATIENT COST															
AVG GOVT COST PER ADMISSION															
AVG GOVT COST PER DAY															
V OUTPATIENT CARE COST SHARED AS INPATIENT															
USER BENEFICIARIES															
DEPT OF ACT DUTY SPONSOR															
RETIREE															
DEPT OF RET OR DEC SPONSOR															
NUMBER OF VISITS															
NUMBER OF NON-VISIT SERVICES															
TOTAL GOVERNMENT COST															
TOTAL PATIENT COST															
TOTAL GOVT AND PATIENT COST															
AVG GOVT COST PER ADMISSION															
AVG GOVT COST PER DAY															
VI TOTAL INPATIENT AND OUTPATIENT CARE															
USER BENEFICIARIES															
DEPT OF ACT DUTY SPONSOR															
RETIREE															
DEPT OF RET OR DEC SPONSOR															
NUMBER OF VISITS															
NUMBER OF NON-VISIT SERVICES															
TOTAL GOVERNMENT COST															
TOTAL PATIENT COST															
TOTAL GOVT AND PATIENT COST															
AVG GOVT COST PER ADMISSION															
AVG GOVT COST PER DAY															

REPORT NO: W0085-002 5-20-85
MODE 2 (28: BENEFICIARY 5-2 GGT ZIP)

CHAMPUS HEALTH CARE SUMMARY BY PRIMARY DIAGNOSIS
BASED ON CARE RECEIVED FROM 01/10/83 THRU 30/09/84 FOR
REGION 1 003

PAGE 3

***** CATEGORY OF CARE *****

I INPATIENT HOSPITAL SERVICES	DENTAL	OBSTETRICS	GYNECOLOGY	OPHTHALMOLOGY	PSYCHIATRY GROUP 1	PSYCHIATRY GROUP 2	SPECIAL PEDIATRICS
USER BENEFICIARIES	18	2,212	107	35	537	709	335
DEPT OF ACT DUTY SPONSOR	5	2,010	51	17	217	288	312
RETIREE	4	1	1	1	53	130	3
DEPT OF RET OR DEC SPONSOR	9	200	5	10	267	291	20
TOTAL HOSPITAL ADMISSIONS	8	2,232	57	25	534	604	284
HOSPITAL DAYS	33	7,530	368	105	14,128	4,881	4,489
AVERAGE LENGTH OF STAY (DAYS)	4.13	3.37	6.47	4.20	19.128	8.13	15.81
AVERAGE DAILY PATIENT LOAD	0.09	1.01	0.23	0.20	38.71	31.51	11.30
TOTAL GOVERNMENT COST	32,231	20,736	158,438	31,502	3,934,852	1,908,016	3,361,920
TOTAL PATIENT COST	16,652	349,801	231,429	16,349	1,008,017	3,197,697	3,559,617
TOTAL GOVT AND PATIENT COST	48,883	5,272,537	3,895,867	47,851	4,942,869	5,105,713	6,921,537
AVG GOVT COST PER ADMISSION	1098.98	2,383.53	1,851.93	1,260.60	9,204.49	7,253.48	24,423.74
AVG GOVT COST PER DAY	976.70	653.75	430.13	300.02	222.47	206.72	1,193.92
II INPATIENT PROFESSIONAL SERVICES							
USER BENEFICIARIES	15	3,955	219	101	522	483	504
DEPT OF ACT DUTY SPONSOR	11	3,650	113	56	223	221	464
RETIREE	4	303	105	20	40	61	6
DEPT OF RET OR DEC SPONSOR	0	2	1	25	259	201	34
TOTAL HOSPITAL ADMISSIONS	24	3,955	362	205	7,705	4,994	4,519
NUMBER OF VISITS	14	14,997	358	158	222	366	4,821
NUMBER OF NON-VISIT SERVICES	1,012	1,694,368	25,689	15,955	404,250	271,834	4,631,601
TOTAL GOVERNMENT COST	185	112,093	8,714	1,199	48,060	48,397	23,609
TOTAL PATIENT COST	1,197	1,806,461	34,403	15,756	320,310	320,231	487,069
TOTAL GOVT AND PATIENT COST							
III TOTAL INPATIENT SERVICES							
USER BENEFICIARIES	29	5,258	275	121	230	890	839
DEPT OF ACT DUTY SPONSOR	14	3,698	132	25	210	1,307	528
RETIREE	11	357	138	27	369	1,307	528
DEPT OF RET OR DEC SPONSOR	33,243	6,617,104	184,126	47,627	3,527,263	4,209,286	3,825,380
TOTAL GOVERNMENT COST	16,806	4,611,893	72,144	15,150	4,209,286	5,057,013	4,021,386
TOTAL PATIENT COST	49,869	7,078,997	256,270	63,007	4,431,889	5,263,299	4,041,986
TOTAL GOVT AND PATIENT COST	66,675	11,690,890	2,277,414	78,157	8,641,175	10,320,312	8,063,372
AVG GOVT COST PER ADMISSION	1,007.36	878.77	500.36	1,551.97	251.09	221.00	1,382.17
IV OUTPATIENT PROFESSIONAL SERVICES							
USER BENEFICIARIES	99	240	2,032	1,286	3,127	3,391	528
DEPT OF ACT DUTY SPONSOR	40	210	859	407	1,307	1,307	528
RETIREE	14	3	1	268	389	1,307	528
DEPT OF RET OR DEC SPONSOR	45	27	1,195	611	1,431	1,307	528
TOTAL HOSPITAL ADMISSIONS	180	158	3,722	2,762	30,010	28,027	1,333
NUMBER OF VISITS	115	454	6,923	2,762	28,027	28,027	1,333
NUMBER OF NON-VISIT SERVICES	6,332	21,701	182,568	1,177,229	1,377,920	1,278,361	2,042
TOTAL GOVERNMENT COST	6,332	10,110	182,568	1,177,229	1,377,920	1,278,361	2,042
TOTAL PATIENT COST	10,312	3,181	32,656	168,629	3,527,263	5,263,299	4,041,986
TOTAL GOVT AND PATIENT COST	33,644	13,291	209,224	1,845,858	4,905,183	6,541,660	6,083,968
AVG GOVT COST PER VISIT	33.64	13.29	50.12	1,845.86	251.09	221.00	1,382.17
V OUTPATIENT CARE COST SHARED AS IMPATIENT							
USER BENEFICIARIES	1	663	10	1	0	3	0
DEPT OF ACT DUTY SPONSOR	1	601	10	1	0	3	0
RETIREE	0	61	0	0	0	0	0
DEPT OF RET OR DEC SPONSOR	0	0	0	0	0	0	0
TOTAL GOVERNMENT COST	413	86,339	4,876	201	1,307	1,307	528
TOTAL PATIENT COST	0	3,616	4,634	226	2,042	2,042	1,333
TOTAL GOVT AND PATIENT COST	413	89,955	9,510	427	3,354	3,354	1,861
VI TOTAL INPATIENT AND OUTPATIENT CARE							
USER BENEFICIARIES	126	4,467	2,196	1,364	3,482	3,967	1,018
DEPT OF ACT DUTY SPONSOR	54	4,067	948	1,294	1,427	2,007	528
RETIREE	17	6	10	282	427	1,431	528
DEPT OF RET OR DEC SPONSOR	35	394	10	628	1,603	1,527	196
TOTAL GOVERNMENT COST	39,713	6,725,143	375,565	165,287	9,925,283	9,984,953	3,937,239
TOTAL PATIENT COST	20,921	475,619	214,557	184,564	1,519,278	1,590,864	2,071,994
TOTAL GOVT AND PATIENT COST	60,634	7,200,762	590,122	349,851	11,444,561	11,575,817	6,009,233

APPENDIX C
PATIENT INFORMATION TO INCLUDE ICD-B CODES

26
PERIOD
1986

REPORT

ORDF DUMP DSN = OCH-OR-MST-PM3401 - 03
RECORD SEQ NO FROM , TO 99999999999
RECORD SEQ NO - 11

OR030-001
NEW DATE: 14 AUG
RUN TIME: 11.01.00

FIXED PART

F-01 FI NUMBER (CONTRACT CODE)	43
F-02 CONTRACT NUMBER	01UC16
F-03 VOUCHER NUMBER	435130
F-04 VOUCHER RESUBMISSION NO	0
F-05 INVOICE END DATE	030234062
F-06 VOUCHER PAY DATE	5407
F-07 CYCLE DATE	0309-6000
F-08 CLAIM NUMBER - STATL CODE	US
F-09 CLAIM NUMBER - DATE	34641
F-10 CLAIM NUMBER - ICN	0000
F-11 MULTI PGM/FY FLAG	1
F-12 CLAIM TYPE	2
F-13 IMPATIENT/OUTPATIENT CODE	1
F-14 RECORD PROCESSING MODE	1
F-15 ADMIN COUNT CODE	0
F-16 CLAIM COUNT CODE	030234062
F-17 CLAIM RESUBMISSION FLAG	000000000
F-18 CLAIM PTC DATE	3
F-19 CLAIM ADJUSTMENT DATE	1
F-20 CLAIM DELAY CODE	0
F-21 CLAIM FORM CODE	523728061
F-22 CLAIM OVERRIDE CODE	1
F-23 SPECIAL PROCESSING CODE	0
F-24 DENIAL CODE	0
F-25 SPONSOR S-AM	523728061
F-26 SPONSOR STATUS	1
F-27 SPONSOR BRANCH OF SERVICE	03
F-28 SPONSOR PAY GRADE	CARLINO BARGA M
F-29 PATIENT NAME	0
F-30 PATIENT RELATIONSHIP	2
F-31 PATIENT SEX	0
F-32 PATIENT DATE OF BIRTH	071149102
F-33 PATIENT AGE	34
F-34 PATIENT CERTIFICATION	1
F-35 PATIENT ZIP/COUNTRY CODE	06042
F-36 AMOUNT ALLOWED	15035.77
F-37 AMOUNT ALLOWED	15035.77
F-38 PATIENT COST SHARE	00088.40
F-39 AMOUNT PAID OTHER SOURCE	00000.00
F-40 AMOUNT PAID GOVT TO SOURCE	15767.37
F-41 AMOUNT REMING TO SPON/PAT	00000.00
F-42 AMOUNT APPLIC DEDUCT	00.00
F-43 TOTAL PATIENT PAY	00095.40
F-44 TOTAL GOVERNMENT PAY	15767.37
F-45 DEDUCTIBLE FLAG	0
F-46 PROV PARTIC CODE	1

00000000
RUN DATE: 14 JUL
RUN TIME: 11.01.00

RECORD SEQ NO FROM 1 TO 99999999999
RECORD SEQ NO - 11

REPORT

PERIOD
1986

F-47 CARE END FISCAL YEAR	54
F-48 CARE END CALENDAR YEAR	84
F-49 BENEFIT CLAIM COUNT CODE	1
F-50 CLAIM FORM COUNT CODE	1
F-51 VOUCHER NOTICE DATE	4040-0404
F-52 BASIS FOR CARE	0
F-53 SUCCESSIVE ADMIN CODE	0
F-54 HOSP SVLS	1
F-55 FI BREAK CODE	1
F-56 OCHAMPU BREAK CODE	1
F-57 NUMBER HOSPITAL DAYS	013
F-58 HOSPITAL BEGIN DATE	011104013
F-59 HOSPITAL END DATE	011134011
F-60 SPECIAL RATE CODE	71080
F-61 DIAGNOSIS CODE	50
F-62 ICD EDIT NUMBER	3527
F-63 OPERATIONS/MON-SURGICAL	340417134
F-64 SOURCE OF CARE ID	A
F-65 SOURCE CARE TYPE FACILITY	80216
F-66 SOURCE OF CARE ZIP	7140
F-67 LONG TERM APPROVAL NUM	1
F-68 DILL STAT	2
F-69 PATIENT DISPOSITION	011104018
F-70 INITIAL ADMISSION DATE	1
F-71 ADMISSION CNT CODE	7140
F-72 CONVERTED ICDA-3 CODE	NON-SURG
F-73 CONVERTED ICDA-3 OPS/NON-SURG	
F-74 FACILITY SUFFIX	
F-75 HOSPITAL DAYS DISALLOWED	
F-76 PERSON HOSPITAL DAYS DISALLOW	002
F-77 OCCURRENCE COUNT	

VARIABLE PART

1-76 ALPHA PFX MJSP 1	C
1-77 AMT DETAIL CHARGES HCSP 1	01144J.00
1-78 ALPHA PFX MJSP 2	F
1-79 AMT DETAIL CHARGES HCSP 2	06421.28
1-80 ALPHA PFX MJSP 3	I
1-81 AMT DETAIL CHARGES HCSP 3	01067.35
1-82 ALPHA PFX MJSP 4	J
1-83 AMT DETAIL CHARGES HCSP 4	00445.00
1-84 ALPHA PFX MJSP 5	K
1-85 AMT DETAIL CHARGES HCSP 5	0065.70
1-86 ALPHA PFX MJSP 6	L
1-87 AMT DETAIL CHARGES HCSP 6	01484.35
1-88 ALPHA PFX MJSP 7	M
1-89 AMT DETAIL CHARGES HCSP 7	01403.45

*** THIS INFORMATION IS PROTECTED BY THE PRIVACY ACT OF 1974 (PL 93-579) ***

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PERIOD
1086

REPORT

OR. PW84 - 03
1 TO 999999999999
11

RECORD SEQ NO FROM
RECORD SEQ NO -

JP0 J1
RLM DATE: 14 A
RUN TIME: 11.01. . .

1-50 DETAIL RECORD NUMBER	01
1-91 STATE/COUNTRY OF LAKE	US
2-76 ALPHA PFX HOSP 1	T 00725.25
2-77 AMT DETAIL CHARGES HOSP 1	R
2-78 ALPHA PFX HOSP 2	01482.00
2-79 AMT DETAIL CHARGES HOSP 2	00000.00
2-80 ALPHA PFX HOSP 3	00000.00
2-81 AMT DETAIL CHARGES HOSP 3	00000.00
2-82 ALPHA PFX HOSP 4	00000.00
2-83 AMT DETAIL CHARGES HOSP 4	00000.00
2-84 ALPHA PFX HOSP 5	00000.00
2-85 AMT DETAIL CHARGES HOSP 5	00000.00
2-86 ALPHA PFX HOSP 6	00000.00
2-87 AMT DETAIL CHARGES HOSP 6	00000.00
2-88 ALPHA PFX HOSP 7	00000.00
2-89 AMT DETAIL CHARGES HOSP 7	00000.00
2-90 DETAIL RECORD NUMBER	02
2-91 STATE/COUNTRY OF LAKE	05

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